

NETWORKS

FAQ

Q What is Wake-on-Lan and how do I use it?

A When your PC is turned off, it still provides power to the network port. If the BIOS supports it, a special network packet called the Magic Packet can be sent to the network card, which tells the PC to power itself on. To use it, you'll need a utility such as Depicus' free Wake On Lan for Windows (www.depicus.com). You also need to know your PC's hardware MAC address, which you can find out by typing `ipconfig /all` at a command prompt in Windows.

Wake-on-Lan can be made to work over the internet, too, but you'll have to reconfigure your router to let the Magic Packet through. More detailed information on how to do this can be found in this month's *PC Builder* on page 190.

David Ludlow
Deputy Editor

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BILLION BiPAC 7404VGP

★★★★★
£112 inc VAT

A standard wireless router will do for most homes, but if you run a business or have more advanced needs, a router such as Billion's BiPAC 7404VGP is probably a better choice. It doesn't look like much from the outside and is one of the least-attractive routers we've seen. However, like its predecessor the 7402VGP, the 7404VGP is one of the most feature-packed routers on the market. It's not recommended for beginners, though, as it's one of the most difficult routers we've had to set up.

Configuring the router for the first time is tricky. There's a quick-start wizard, but it's confusing. If you want to use DHCP to receive an IP address from your ISP automatically, you have to enter the router's IP address as 0.0.0.0. There's an explanation of this on the configuration page, but a drop-down menu or tick box would have been easier. The configuration wizard also doesn't deal with wireless security settings, so you'll have to turn on security manually. Fortunately, the router supports WPA-PSK and WPA-PSK2.

The 7404VGP is a standard 802.11g 54Mbit/s wireless router. Its performance was very good at near and far ranges, with little drop-off moving 10m away. The 7402VGP we reviewed in *What's New: Networks*, *Shopper* July 2006 suffered at long range, so it's good to see its successor do better. The performance shows that there's enough bandwidth for sharing an internet connection, but a MIMO or pre-N router would be better if you want to share files or stream video.

The 7404VGP has plenty of other features that will appeal to advanced or business users. It is Annex M ready, which means it



supports the higher 3.5Mbit/s upload speeds of ADSL2+ using its built-in ADSL modem. It also has two telephone ports on the rear, which can be connected to two different SIP VoIP accounts. There's a throughput for your existing phone line, too, so you can use one handset for landline and VoIP calls. Calls are made using VoIP by default, but you can choose which calls you want to route over your landline to make emergency calls or make best use of a call plan. Quality of Service (QoS) lets you give priority to voice traffic, so you'll have clean voice calls even when downloading large files.

The firewall is one of the more advanced ones we've seen. It has a basic interface that lets you choose between High, Medium or Low levels of security, but you can also edit the packet filter rules

directly to choose which traffic you do and don't want to allow. This isn't for the fainthearted, though, and you could easily struggle with the configuration if you're not familiar with firewalls.

If you run a home or small office, or want absolute control over your internet connection and network settings, the 7404VGP is a great router. But it's expensive and confusing to configure if you don't know exactly what you're doing, so most home users would do better with D-Link's RangeBooster N 650.

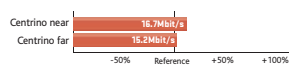
David Ludlow

SUMMARY

- ✓ Two voice ports and QoS
- ✓ Highly configurable
- ✗ Expensive; difficult to use

ADSL WIRELESS ROUTER 802.11g (54Mbit/s), four Ethernet ports, ADSL2+ modem, two telephone ports
PART CODE 7404VGP
SUPPLIER www.pcwb.com
DETAILS www.billion.com

PERFORMANCE (see page 56)



Also consider...

DEVOLO DLAN 200 AVdesk Starter Kit

★★★★★
£139 inc VAT

PRICE CUT!



Devol's AVdesk Starter Kit comes with two HomePlug 200Mbit/s

network adaptors that transmit data over your existing power lines. These performed very quickly, with a throughput of 38.1Mbit/s coming close to pre-N wireless performance.

If wireless is temperamental in your home, these network adaptors will provide you with a fast and reliable alternative.

POWERLINE NETWORKING
Two HomePlug AV Ethernet adaptors with Ethernet port
PART CODE 1186

SUPPLIER www.broadbandbuyer.co.uk DETAILS www.devlo.co.uk ✓ Good value
✗ Interfered with our wireless mouse FULL REVIEW Feb 2007



D-LINK RangeBooster N 650 Router

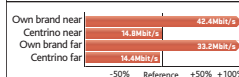
★★★★★
£88 inc VAT



The pre-N RangeBooster router is incredibly easy to set up thanks to the Windows XP

Connect Now system, which configures the router using USB. It's also very quick, peaking at 42.4Mbit/s at close range when using a RangeBooster PC Card, which is easily enough for file sharing or streaming video. This is a great router and incredibly fast for the price.

WIRELESS ROUTER Pre-802.11n wireless router (300Mbit/s), four Ethernet ports, one WAN port, UPnP
PART CODE DIR-635
SUPPLIER www.dabs.com
DETAILS www.dlink.com
✓ Consistently fast; easy setup
✗ No WEP support
FULL REVIEW Nov 2006





D-LINK Wireless Internet Camera

★★★★

£183 inc VAT

D-Link's Wireless Internet Camera lets you monitor any part of your home without the hassle of having to run cables everywhere. It also comes with an Ethernet port, in case you plan to install it near your router. The port is also used for initial configuration. Once you've connected the camera to your network via the wired port, it's detected by the setup software. To use wireless, you have to enter WiFi settings manually, as the setup utility can't scan for wireless networks automatically.

For everyday use, the camera provides a live feed via a web-based interface. The default 640x480 video size was jerky and full of compression artefacts, so we had to drop the video size to 320x240 to get acceptable results. Even so, the quality was less than with a decent USB web camera. You can view the stream over the internet, too, but you'll have to configure your router to forward incoming web requests to the camera.

A big feature, as proclaimed on the box, is the 3G video, so you can view video on your mobile phone. In reality, this feature is tricky to configure. The camera uses RealVideo, so you need a phone with RealPlayer installed. You'll also have to configure your router to pass the video feed through, and then configure your mobile phone to view the stream.

For security, you can configure your camera for motion detection and automatically upload snapshots to a web server. It's easy to configure, and the detection settings mean you can configure the camera to pick up just human movement. D-Link also supplies its IP Monitoring software, which lets you monitor multiple cameras from one application. It records video streams when motion is detected, based on each camera's configured motion-detection settings. It's powerful, but looks dated. The playback software is clunky and difficult to use, too, and it's hard to find a specific video clip.

If you need a wireless camera or want to use multiple cameras together, the Wireless Internet Camera is a good choice. If you just want a single camera, though, a decent webcam connected to your PC does a better job and costs far less.

David Ludlow

SUMMARY

- ✓ Free monitoring software
- ✗ Video quality can be poor
- ✗ Hard to configure 3G video

WIRELESS CAMERA 802.11g (54Mbit/s), 10/100 Ethernet port, 640x480 video resolution
PART CODE DGS-2120
SUPPLIER www.pcbw.com
DETAILS www.dlink.co.uk

FUTIRO Luna

★★★★★

£58 inc VAT

We'd never usually describe VoIP phones as attractive, but Futiro's Luna is a bit different. The sleek, curved phone is designed to stand on your desk and looks more like a piece of art than something you'd use to save money on your phone bill.

The Luna connects to your PC via USB. The springy cable gives you plenty of length, but the USB lead hangs awkwardly out of bottom of the phone and can often get in the way when you're trying to stand up the phone on a desk. More than once we ended up with the phone falling over, a problem that could easily have been solved by having the cable attached a little further up the body. As with most VoIP phones for the PC, the Luna is designed to work with Skype via the bundled utility on the provided CD. Owners of slot-loading drives will be annoyed by the supplied mini CD, as these discs work only with tray-loading drives.

Once the software is installed, the phone can be used to control your Skype installation. There's no LCD, so you'll still need to have your PC's monitor turned on. The cursor keys scroll through your Skype contacts and the number pad lets you dial a telephone number directly using your Skype Out credits. There's also a dedicated volume control, which is handy as it saves you reaching for the System Tray volume control icon if you find that a call is too loud or quiet.

The phone's odd shape takes a while to get used to and feels a little strange when you first pick it up. However, as soon as you get used to it, it's comfortable to use. Call quality is good, with clear background-noise reduction and excellent sound recording. It's simple to hear the person you're talking to, as well. The phone's stand-up design also proves useful, as the Luna can be used as a hands-free phone. While it would be no good in a room full of people, the Luna is loud enough to be used by a single person sitting in front of it and it's nice to see this feature.

The Luna isn't cheap, but it looks great and has the sound quality to match. If you want the looks without the price, Futiro's Terra is the same phone without a numeric keypad. If flexibility is more important, though, US Robotics' Cordless Skype Dual phone is the same price as the Luna, has a screen and uses DECT, so you can use it anywhere in the home.

David Ludlow

SUMMARY

- ✓ Looks great
- ✓ Excellent sound quality
- ✗ Expensive

SKYPE PHONE USB connection, hands-free mode, works with Skype
PART CODE Luna
SUPPLIER www.futiro.com/uk
DETAILS www.futiro.com/uk

CHOOSING A... Wireless Router

Follow the steps to find your ideal specs

STANDARD: 802.11g (54Mbit/s)

ETHERNET PORTS: 4

BROADBAND CONNECTION: Ethernet WAN port
Recommended minimum in grey

1 A basic wireless router with the specifications above will cost you around £25. As a standard 802.11g wireless router, it is quick enough to share an internet connection, but a little slow for file sharing. It doesn't have a built-in modem, so you'll have to use it with an existing broadband modem that has an Ethernet port.

2 If you have ADSL, get a wireless router that has a built-in ADSL modem. This will cost you around £15 to £20 more than a standard router, but lets you connect your router directly to your broadband connection without a separate external modem. Try to get a router with an ADSL2+ modem, as this will support broadband connections up to 24Mbit/s with an appropriate ISP.

3 Want to share files over your network? You'll need to upgrade to a MIMO or pre-N router. MIMO routers are usually WiFi compliant and will get you transfer speeds of around 30Mbit/s. Pre-N routers are faster still, but as they're pre-standard you may have problems getting them working with kit in the future. Both MIMO and Pre-N routers need matching network adaptors to run at full speed.

4 If you're having problems getting a wireless signal in your house, a MIMO or pre-N router can help. Alternatively, look to buy a hi-gain antenna for your router. This will boost the signal and improve throughputs and ranges to the whole of the house. You can also look into adding a hi-gain antenna to a PC's network adaptor.

5 If you've got a printer you want to share on your network, look for a wireless router with a built-in USB port and print server. Don't worry if you can't find one that matches your other requirements, though, as you can always add a dedicated wireless print server later on. Finally, if you're interested in making voice calls using a SIP connection, look for a router with built-in VoIP support as this can save you money.